

Patent claims

1. Assay for identifying an agent that modulates the interaction of interleukin-23 and/or interleukin-12 with a corresponding receptor thereof comprising
 - 5 a) contacting interleukin-23 and/ or interleukin-12 with a corresponding interleukin receptor in the absence and in the presence of a candidate compound which is expected to modulate the interaction of said interleukin with said receptor for a sufficient period of time so that a complex between said interleukin and said receptor can be formed,
 - 10 b) optionally separating the complex from uncomplexed fractions,
 - c) detecting the complex formed in step a),
 - d) determining whether there is a difference in the amount of complex formed in case a candidate compound was absent or present in step a), and
 - 15 e) choosing a candidate compound where a difference is determined in step d) as an agent.
2. The assay of claim 1, wherein the receptor is the interleukin-23 p19 receptor and/or the interleukin-12 p40 receptor.
- 20 3. The assay of any one of claims 1 or 2, wherein the receptor is fused to an immunoglobulin or a fragment thereof.
4. The assay of any one of claims 1 to 3, wherein
 - the interleukin is interleukin-23,
 - 25 - the receptor is the interleukin-23 p19 receptor and/or the interleukin-12 p40 receptor.
5. Assay of any one of claims 1 to 3, wherein
 - the interleukin is interleukin-12,
 - the receptor is the interleukin-12 p40 receptor.
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6. Kit for identifying an agent that modulates the interaction of interleukin-23 and/or interleukin-12 with a corresponding receptor comprising
 - a) interleukin-23 and/or interleukin-12,
 - b) the interleukin-23 p19 receptor and/or the interleukin-12 p40 receptor,

- c) optionally detection means,
- d) instructions for use of said kit, and
- e) optionally a solid phase.

- 5 8. The kit of claim 7, wherein said detection means comprise a label bearing interleukin-12 antibody.
9. The kit of any one of claims 7 or 8, wherein the interleukin receptor is fused to an immunoglobulin or a fragment thereof.
- 10 10. An agent identified by an assay of any one of claims 1 to 5.
11. Use of an agent of claim 10 as a pharmaceutical.
- 15 12. Use of an agent of claim 10 for the manufacture of a medicament for the treatment of a disease selected from the group consisting of autoimmune related diseases, inflammatory diseases and infectious diseases.
- 20 13. Pharmaceutical composition comprising an agent of claim 10 beside at least one pharmaceutical excipient.
- 25 14. Use of the interleukin-23 p19 receptor and/or the interleukin-12 p40 receptor for identifying an agent that modulates the interaction of interleukin-23 with one of said receptors.
- 30 15. Method for determining whether a receptor is specific for interleukin-23 or interleukin-12 or both or none, comprising
- a) providing a receptor,
 - b) contacting interleukin-23 with the receptor of step a) for a sufficient period of time so that a complex between said interleukin and said receptor can be formed,
 - c) contacting interleukin-12 with the receptor of step a) for a sufficient period of time so that a complex between said interleukin and said receptor can be formed,
 - d) optionally separating the complex formed in step b) and/or c) from uncomplexed fractions,

e) detecting the complex formed in step b) and/or in step c) with detection means,

f) determining whether the receptor is

- specific for interleukin-23, which is the case if

a complex formation of step b) and

no complex formation of step c) is detected, or

- specific for interleukin-12, which is the case if

a complex formation of step c) and

no complex formation of step b) is detected, or

- specific for both interleukin-23 and interleukin-12, which is the case if

a complex formation of step b), and

a complex formation of step c) is detected, or

- unspecific for interleukin-23 and interleukin-12, which is the case if

no complex formation of step b), and

no complex formation of step c) is detected.